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Deputy Assistant Director for Operations

22 December 1952

Chief, Foreign Documents Division

Project for Research and Development in the Field
of Mechanical Translation

1. Analysis of the proposed project leads to a summarization as follows:

a. Mechanical translation is only in the theoretical stage at the present time.

b. Phase I or 18 months and \$300,000 would be devoted to testing the practicality of the concept or theory (p 1, Para. 2).

c. The most one can expect after this time and money has been consumed is a machine that will transfer, in part, very simple Russian chemical language into very simple English chemical language (p 5, Para. 2). On the other hand the concept may prove to be impractical.

d. Assuming such a machine could be developed, to operate the machine there would be the need for trained personnel to

(1) feed material into the machine (p 7, last paragraph;

(2) service the electronic equipment and

(3) post-edit and finally personnel and/or machines to type the resultant product.

e. Phase II or 2 more years and an additional one and a quarter million dollars would be devoted to expanding the capability of the machine if it proves practical in Phase I (p 18, Para. 2).

f. At the end of Phase II the most that could be expected is a machine that will transfer simple Russian technical language, in five or six technical fields only (e.g. chemistry, physics, mathematics, electronics, meteorology) into simple English technical language of the same fields (p 14, Para. 3), (p 5, Para. 3 and 4).

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g. Phase III or from 3 to 5 more years and an additional three million dollars would be devoted to developing the machine into a multi-lingual and multi-lateral tool.

h. From this phase would come presumably a machine that could translate from any one of 5 languages of one linguistic family into any one of the other 4 (p 6, Para. 2), (p 15, Para. 2) and maybe into English if English is not a part of the linguistic family (not clarified in proposal).

2. In studying this proposal I have drawn the following conclusions:

a. In the interests of efficient and practical use of government funds, I believe, the contractor should develop the practicality of the concept of mechanical translation more fully on his own and when this is demonstrable, the government should then be asked to support development. We should not leap into what is very possibly a blind alley; certainly not to the extent of \$300,000.

b. At best, the machine, if developed, would have very limited uses for intelligence even after Phase II or 3½ years work. It would only translate one language and within this one language only five highly specialized fields. Its greatest value would be to the scientists of the country. Its greatest interest should be to the Research and Development Board or the National Science Foundation and indirectly to intelligence.

c. Phase III might make the machine of more value to intelligence, but there are a number of qualifications here.

(1) The one portion of this phase that is elaborated is the development of a "core" language to effect the possibility of translating, for example, from Russian into Bulgarian or from Czech into Polish. I do not consider this necessary or even advisable for intelligence purposes.

(2) The machine would handle one linguistic family only, such as the Slavic languages. Presumably much further time and money would be needed for each of the other language families, such as the Germanic, the Romance, the Ural-Altaic, the Turkic, the Semitic, the Indic, etc.

(3) The broad goal of the machine seems to be the translation of scientific works into English and other languages for the dissemination of scientific information. U.S. intelligence interest is only incidental.

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3. In connection with this project, I recommend

a. If possible, that it be given a "pocket veto" to avoid discord, especially if you have not been asked to concur officially.

b. Otherwise, that you do not concur, stating:

I feel the feasibility and practicability of the concept should be more fully demonstrated and the objectives should be much more inclined toward general intelligence usefulness before we proceed with such a contract.

J. J. BAGNALL

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2	Coordination Attn: Mr. Claude E. Hawley		
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REMARKS: 1. As requested by Mr. Hawley, forwarded are informal comments by Chief, Foreign Documents Division.

2. On the basis of these comments, this Office questions the advisability of CIA subsidy of Phase I. It seems to us that the actual "feasibility" of a mechanical translator has to be determined before the potential value of the machine to intelligence agencies can be judged.

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3. Would it be possible for G-2 or CIA to interest the National Science Foundation, Ford Foundation or some non-governmental enterprise (IBM) to underwrite the expense of the exploratory phase?